

# Endocrinology, Diabetes, and Metabolism Milestones for Singapore



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## **The Endocrinology, Diabetes, and Metabolism Milestones for Singapore**

The Milestones are designed only for use in evaluation of fellows in the context of their participation in ACGME International (ACGME-I)-accredited fellowship programs. The Milestones provide a framework for assessing the development of the fellow in key dimensions of physician competence in a subspecialty. They neither represent the entirety of the dimensions of the six domains of physician competence, nor are they designed to be relevant in any other context.

## Milestones Reporting

This document presents milestones designed for programs to use in semi-annual review of fellow performance and reporting to the ACGME-I. Milestones are knowledge, skills, attitudes, and other attributes for each of the ACGME-I competencies organized in a developmental framework from less to more advanced. They are descriptors and targets for fellow performance as a learner moves from entry into their program through graduation.

For each period, review and reporting will involve selecting milestone levels that best describe each fellow's current performance and attributes. Milestones are arranged in numbered levels. Tracking from "Level 1" to "Level 5" is synonymous with moving from novice to expert in the specialty. These levels do not correspond with time in the educational program. Dependent upon previous education and experience, fellows may enter a program at varying points in the Milestones.

Selection of a level implies that the fellow substantially demonstrates the milestones in that level, as well as those in lower levels (see the diagram on page v).

- Level 1**      The fellow demonstrates milestones expected of an incoming fellow.
- Level 2**      The fellow is advancing and demonstrates additional milestones, but is not yet performing at a mid-fellowship level.
- Level 3**      The fellow continues to advance and demonstrate additional milestones; the fellow demonstrates the majority of milestones targeted for residency in this sub-competency.
- Level 4**      The fellow has advanced so that he or she now substantially demonstrates the milestones targeted for fellowship. This level is designed as the graduation target.
- Level 5**      The fellow has advanced beyond performance targets set for fellowship and is demonstrating "aspirational" goals which might describe the performance of someone who has been in practice for several years. It is expected that only a few exceptional fellows will reach this level.

## Additional Notes

The “Level 4” Milestones are designed as the graduation *target* and *do not* represent a graduation *requirement*. Making decisions about readiness for graduation is the purview of the program director. Study of Milestones performance data will be required before the ACGME-I and its partners will be able to determine whether milestones in the first four levels appropriately represent the developmental framework, and whether Milestone data overall are of sufficient quality to be used for high-stakes decisions.

*Answers to Frequently Asked Questions about Milestones are posted on the [ACGME-I website](#).*

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The diagram below presents an example set of milestones for one subcompetency in the same format as the ACGME-I Report Worksheet. For each reporting period, a learner’s performance on the milestones for each subcompetency will be indicated by selecting the level of milestones that best describes that learner’s performance in relation to those milestones.

| Practice-Based Learning and Improvement 2: Reflective Practice and Commitment to Personal Growth |  |   |   |   |
|--|--|---|---|---|
| Level 1  | Level 2  | Level 3   | Level 4   | Level 5   |
| Accepts responsibility for personal and professional development by establishing goals           | Demonstrates openness to performance data (feedback and other input) in order to inform goals              | Seeks performance data episodically, with adaptability and humility   | Intentionally seeks performance data consistently, with adaptability and humility                                     | Role models consistently seeking performance data, with adaptability and humility |
| Identifies the factors that contribute to gap(s) between expectations and actual performance     | Analyzes and reflects on the factors that contribute to gap(s) between expectations and actual performance | Analyzes, reflects on, and institutes behavioral change(s) to narrow the gap(s) between expectations and actual performance | Challenges assumptions and considers alternatives in narrowing the gap(s) between expectations and actual performance | Coaches others on reflective practice   |
| Actively seeks opportunities to improve  | Designs and implements a learning plan, with prompting   | Independently creates and implements a learning plan  | Uses performance data to measure the effectiveness of the learning plan and, when necessary, improves it              | Facilitates the design and implementation of learning plans for others            |
| <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>  | <input type="checkbox"/>  | <input type="checkbox"/>  |
| Comments:  |  |   |   | Not Yet Achieved Level 1 <input type="checkbox"/>                                 |

Selecting a response box in the middle of a level implies that milestones in that level and in lower levels have been substantially demonstrated.

Selecting a response box on the line in between levels indicates that milestones in lower levels have been substantially demonstrated as well as **some** milestones in the higher level(s).

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| Patient Care 1: Gathers and Synthesizes Essential and Accurate Information to Define Each Patient's Clinical Problem(s)   |   |  |  |   |
|---|---|--|--|---|
| Level 1   | Level 2   | Level 3  | Level 4  | Level 5   |
| <p>Sometimes can collect accurate historical data</p> <p>Can perform physical exam, but misses some key physical exam findings</p> <p>Relies exclusively on documentation of others to generate own database or differential diagnosis or is overly reliant on secondary data</p> <p>Recognizes patient's central clinical problems sometimes</p> <p>Sometimes recognizes potentially life-threatening problems sometimes</p> | <p>Consistently acquires accurate and relevant histories</p> <p>Consistently performs accurate and appropriately thorough physical exams</p> <p>Consistently recognizes patient's central clinical problem but develops limited differential diagnoses</p> <p>Consistently recognizes potentially life-threatening problems</p> | <p>Acquires accurate histories in an efficient, prioritized, and hypothesis-driven fashion</p> <p>Performs accurate physical exams targeted to the patient's problems</p> <p>Uses and synthesizes collected data to define a patient's central clinical problem(s) to generate a prioritized differential diagnosis and problem list</p> | <p>Obtains relevant historical subtleties, including sensitive information that informs the differential diagnosis</p> <p>Identifies subtle or unusual physical exam findings</p> <p>Efficiently uses all sources of secondary data to inform differential diagnosis</p> <p>Effectively uses history and physical examination skills to minimize the need for further diagnostic testing</p> | <p>Role models and teaches the effective use of history and physical examination skills to minimize the need for further diagnostic testing</p> |
| <input type="checkbox"/>  | <input type="checkbox"/>  | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>  |
| Comments:   |   |  |  | Not Yet Achieved Level 1 <input type="checkbox"/>   |

Endocrinology, Diabetes, and Metabolism Milestones for Singapore

| Patient Care 2: Develops and Achieves Comprehensive Management Plan for Each Patient   |  |  |  |   |
|--|--|--|--|---|
| Level 1  | Level 2  | Level 3  | Level 4  | Level 5   |
| <p>Sometimes creates appropriate or accurate care plans</p> <p>Sometimes reacts to situations that require urgent or emergency care</p> <p>Sometimes seeks additional guidance when needed</p> | <p>Consistently develops an appropriate care plan but seeks additional guidance when needed</p> <p>Consistently reacts to situations that require urgent or emergency care</p> | <p>Consistently develops appropriate care plan</p> <p>Consistently recognizes situations requiring urgent or emergency care and arranges for an appropriate level of care</p> <p>Appropriately manages straightforward, common infectious disease cases</p> <p>Seeks additional guidance and/or consultation, as appropriate</p> | <p>Appropriately modifies care plans based on patient's clinical course, additional data, patient preferences, and cost-effectiveness principles</p> <p>Recognizes disease presentations that deviate from common patterns and require complex decision making, incorporating diagnostic uncertainty</p> <p>Manages complex acute and chronic conditions</p> | <p>Role models and teaches complex and patient-centered care</p> <p>Develops customized, prioritized care plans for the most complex patients, incorporating diagnostic uncertainty and cost-effectiveness principles</p> |
| <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>  |
| Comments:  |  |  |  | Not Yet Achieved Level 1 <input type="checkbox"/>   |

Endocrinology, Diabetes, and Metabolism Milestones for Singapore

| Patient Care 3: Manages Patients with Progressive Responsibility and Independence   |   |   |  |   |
|---|---|---|--|---|
| Level 1   | Level 2   | Level 3   | Level 4  | Level 5   |
| <p>At all times, requires direct supervision in the delivery of patient care</p> <p>At all times, requires direct supervision to manage problems or common chronic diseases in appropriate clinical settings</p> <p>At all times, provides preventive care in appropriate clinical settings with guidance</p> <p>At all times, requires direct supervision to manage patients with straightforward diagnoses in all appropriate clinical settings</p> | <p>Sometimes requires direct supervision to ensure patient safety and quality care</p> <p>Sometimes requires direct supervision to manage problems or common chronic diseases in appropriate clinical settings</p> <p>Provides preventive care in appropriate clinical settings with guidance most of the time</p> <p>Sometimes requires direct supervision to manage patients with straightforward diagnoses in all appropriate clinical settings</p> <p>Manages complex inpatients or patients requiring intensive care with guidance</p> | <p>Requires indirect supervision to ensure patient safety and quality care</p> <p>Provides appropriate preventive care and chronic disease management in appropriate clinical settings with minimal guidance</p> <p>Provides comprehensive care for single or multiple diagnoses in all appropriate clinical settings</p> <p>Under supervision, provides appropriate care in the intensive care unit</p> <p>Initiates management plans for urgent or emergency care</p> | <p>Independently manages patients across applicable inpatient, outpatient, and ambulatory clinical settings who have a broad spectrum of clinical disorders, including undifferentiated syndromes</p> <p>Seeks additional guidance and/or consultation as appropriate</p> <p>Appropriately manages situations requiring urgent or emergency care</p> <p>Effectively supervises the management decisions of the team in all appropriate clinical settings</p> | <p>Effectively manages unusual, rare, or complex disorders in all appropriate clinical settings</p> |
| <input type="checkbox"/>  | <input type="checkbox"/>  | <input type="checkbox"/>  | <input type="checkbox"/>   | <input type="checkbox"/>  |
| Comments:   |   |   |  | Not Yet Achieved Level 1 <input type="checkbox"/>   |



Endocrinology, Diabetes, and Metabolism Milestones for Singapore

| Patient Care 4: Demonstrates Skill in Performing and Interpreting Invasive Procedures  |   |   |  |   |
|--|---|---|--|---|
| Level 1  | Level 2   | Level 3   | Level 4  | Level 5   |
| <p>Possesses insufficient technical skill for safe completion of common invasive procedures with appropriate supervision</p> <p>Sometimes recognizes patient safety and comfort when performing invasive procedures</p> <p>Applies the ethical principles of informed consent</p> <p>Recognizes the need to obtain informed consent for procedures, but ineffectively obtains it</p> | <p>Possesses basic technical skill for safe completion of common invasive procedures with appropriate direct supervision</p> <p>Is attentive to patient safety and comfort when performing invasive procedures</p> <p>Recognizes the need to obtain informed consent for procedures, and effectively obtains it</p> | <p>Possesses sufficient technical skill for the completion and interpretation of some common invasive procedure with appropriate indirect supervision</p> <p>Consistently manages patient safety and comfort when performing invasive procedure</p> <p>Recognizes appropriate patients, indications, and associated risks in the performance of invasive procedures</p> <p>Obtains and documents informed consent</p> | <p>Consistently demonstrates technical skill to perform and interpret invasive procedures successfully and safely</p> <p>Maximizes patient comfort and safety when performing invasive procedures</p> <p>Consistently recognizes appropriate patients, indications, and associated risks in the performance of invasive procedures</p> <p>Effectively obtains and documents informed consent in challenging circumstances (e.g., language or cultural barriers)</p> <p>Quantifies evidence for risk-benefit analysis during obtainment of informed consent for complex procedures or therapies</p> | <p>Demonstrates skill to independently perform and interpret complex invasive procedures that are anticipated for future practice</p> <p>Demonstrates expertise to teach and supervise others in the performance of invasive procedures</p> <p>Designs consent instrument for a human subject research study; files an Institution Review Board (IRB) application</p> |
| <input type="checkbox"/>   | <input type="checkbox"/>  | <input type="checkbox"/>  | <input type="checkbox"/>   | <input type="checkbox"/>  |
| Comments:  |   |   |  | Not Yet Achieved Level 1 <input type="checkbox"/>   |

Endocrinology, Diabetes, and Metabolism Milestones for Singapore

| Patient Care 5: Demonstrates Skill in Performing and Interpreting Non-Invasive Procedures and/or Testing   |   |  |   |   |
|--|---|--|---|---|
| Level 1  | Level 2   | Level 3  | Level 4   | Level 5   |
| <p>Sometimes recognizes patients for whom non-invasive procedures and/or testing is not warranted or is unsafe</p> <p>Attempts to perform or interpret non-invasive procedures and/or testing without sufficient skill or supervision</p> <p>Sometimes recognizes the need to discuss procedure indications, processes, and potential risks with patients</p> <p>Engage the patient in the informed consent process but does not effectively describe risks and benefits of procedures</p> | <p>Possesses sufficient skill to safely perform and interpret non-invasive procedures and/or testing, with appropriate direct supervision</p> <p>Is attentive to patient safety and comfort when performing non-invasive procedures and/or testing procedures</p> <p>Applies the ethical principles of informed consent</p> <p>Recognizes need to obtain informed consent for procedures and effectively obtains it</p> | <p>Consistently recognizes appropriate patients, indications, and associated risks in the use of non-invasive procedures and/or testing, with indirect supervision</p> <p>Consistently integrates procedures and/or testing results with clinical features in the evaluation and management of patients, with indirect supervision</p> <p>Can safely perform and interpret selected non-invasive procedures and/or testing procedures, with minimal supervision</p> <p>Consistently recognizes high-risk findings</p> <p>Consistently obtains and documents informed consent</p> | <p>Consistently and independently recognizes appropriate patients, indications, limitations, and associated risks in use of non-invasive procedures and/or testing</p> <p>Independently integrates procedures and/or testing results with clinical findings in the evaluation and management of patients</p> <p>Recognizes procedures and/or testing results that indicate high-risk state or adverse prognosis</p> <p>Recognizes artifacts and normal variants in all situations</p> <p>Consistently performs and interprets non-invasive procedures and/or testing in a safe and effective manner</p> | <p>Demonstrates skill to independently perform and interpret complex non-invasive procedures that are anticipated for future practice</p> <p>Demonstrates expertise to teach and supervise others in the performance on non-invasive procedures</p> <p>Designs consent instrument for a human subject research study; files an Institution Review Board (IRB) application</p> |

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|                          |                          |                          |   |                          |
|--------------------------|--------------------------|--------------------------|---|--------------------------|
|                          |                          |                          | Effectively obtains and documents informed consent in challenging circumstances (e.g., language or cultural barriers)   |                          |
|                          |                          |                          | Quantifies evidence for risk-benefit analysis during obtainment of informed consent for complex procedures and/or tests |                          |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>  | <input type="checkbox"/> |
| Comments:                |                          |                          | Not Yet Achieved Level 1  | <input type="checkbox"/> |

Endocrinology, Diabetes, and Metabolism Milestones for Singapore

| Patient Care 6: Requests and Provides Consultative Care                               |  |  |   |   |
|---|--|--|---|---|
| Level 1   | Level 2  | Level 3  | Level 4   | Level 5   |
| Sometimes manages patients as a consultant to other physicians/health care teams      | Consistently manages patients as a consultant to other physicians/health care teams      | Provides consultation services for patients with clinical problems requiring basic risk assessment | Provides consultation services for patients with basic and complex clinical problems requiring detailed risk assessment | Provides consultation services for patients with very complex clinical problems requiring extensive risk assessment |
| Sometimes applies risk assessment principles to patients while acting as a consultant | Consistently applies risk assessment principles to patients while acting as a consultant | Asks meaningful clinical questions that guide the input of consultants                             | Appropriately integrates recommendations from other consultants to effectively manage patient care                      | Models management of discordant recommendations from multiple consultants   |
| Sometimes formulates a clinical question for a consultant to address                  | Consistently formulates a clinical question for a consultant to address                  |  |   |   |
| <input type="checkbox"/>  | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>  | <input type="checkbox"/>  |
| Comments:   |  |  |   | Not Yet Achieved Level 1 <input type="checkbox"/>   |

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| Medical Knowledge 1: Possesses Clinical Knowledge   |   |   |   |   |
|---|---|---|---|---|
| Level 1   | Level 2   | Level 3   | Level 4   | Level 5   |
| Possesses basic scientific, socioeconomic, or behavioral knowledge required to provide patient care | Possesses sufficient scientific, socioeconomic, and behavioral knowledge required to provide care for common medical conditions and basic preventive care | Possesses advanced the scientific, socioeconomic, and behavioral knowledge required to provide care for common medical conditions and basic preventive care | Possesses the scientific, socioeconomic, and behavioral knowledge required to provide care for complex medical conditions and comprehensive preventive care | Possesses the scientific, socioeconomic, and behavioral knowledge required to successfully diagnose and treat medically uncommon, ambiguous, and complex conditions |
| <input type="checkbox"/>  | <input type="checkbox"/>  | <input type="checkbox"/>  | <input type="checkbox"/>  | <input type="checkbox"/>  |
| Comments:   |   |   |   | Not Yet Achieved Level 1 <input type="checkbox"/>   |

Endocrinology, Diabetes, and Metabolism Milestones for Singapore

| Medical Knowledge 2: Knowledge of Diagnostic Testing and Procedures          |  |   |   |   |
|--|--|---|---|---|
| Level 1  | Level 2  | Level 3   | Level 4   | Level 5   |
| Possesses foundational knowledge to apply diagnostic testing to patient care | <p>Interprets basic diagnostic tests accurately most of the time</p> <p>Understands the concepts of pre-test probability and test performance characteristics</p> <p>Minimally understands the rationale and risks associated with common procedures</p> | <p>Consistently interprets basic diagnostic tests accurately</p> <p>Understands the concepts of pre-test probability and tests performance characteristics sometimes</p> <p>Fully understands the rationale and risks associated with common procedures</p> | <p>Interprets complex diagnostic tests accurately while accounting for limitations and biases</p> <p>Knows the indications for, and limitations of, diagnostic testing and procedures</p> <p>Understands the concepts of pre-test probability and test performance characteristics</p> <p>Teaches the rationale and risks associated with common procedures and anticipates potential complications of procedures</p> | <p>Anticipates and accounts for subtle nuances of interpreting diagnostic tests and procedures</p> <p>Pursues knowledge of new and emerging diagnostic tests and procedures</p> |
| <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>  | <input type="checkbox"/>  | <input type="checkbox"/>  |
| Comments:  |  |   |   | Not Yet Achieved Level 1 <input type="checkbox"/>   |

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| <b>Medical Knowledge 3: Scholarship</b>  |  |  |  |  |
|--|--|--|--|--|
| Level 1  | Level 2  | Level 3  | Level 4  | Level 5  |
| <p>Is sometimes aware of or interested in scientific inquiry</p> <p>Is sometimes aware of scholarly investigation in the specialty</p> <p>Sometimes attempts to engage in critical thinking regarding clinical practice, quality improvement, patient safety, education, or research</p> | <p>Is interested in scholarly activity, but does not initiate or follow through</p> <p>Performs a literature search using relevant scholarly sources to identify pertinent articles</p> <p>Is aware of basic statistical concepts, but has incomplete understanding of their application; inconsistently identifies methodology flaws</p> <p>Communicates rudimentary details of scientific work, including personal scholarly work; needs to improve ability to present in small groups</p> | <p>Identifies areas worthy of scholarly investigation and formulates a plan under supervision of a mentor</p> <p>Critically reads scientific literature and identifies major methodologies flaws and inconsistencies within or between publications</p> <p>Understands and can apply basic statistical concepts, and can identify potential analytical methods for data or problem assessment</p> <p>Effectively presents at journal club, quality improvement meetings, clinical conferences, and/or can effectively describe and discuss personal scholarly work or research</p> | <p>Formulates ideas worthy of scholarly investigation</p> <p>Collaborates with other investigators to design and complete a project related to clinical practice, quality improvement, patient safety, education, or research</p> <p>Critiques specialized scientific literature effectively</p> <p>Dissects a problem into its many component parts and identifies strategies for solving</p> <p>Uses analytical methods of the field effectively</p> <p>Presents scholarly activity at local or regional meetings, and/or submits an abstract summarizing scholarly work to regional/state/national meetings, and/or publishes</p> | <p>Independently formulates novel and important ideas worthy of scholarly investigation</p> <p>Leads a scholarly project advancing clinical practice, quality improvement, patient safety, education, or research</p> <p>Obtains independent research funding</p> <p>Critiques specialized scientific literature at a level consistent with participation in peer review</p> <p>Employs optimal statistical techniques</p> <p>Teaches analytical methods in chosen field to peers and others</p> <p>Effectively presents scholarly work at national and international meetings</p> |

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|                          |                          |                          |  |  |
|--------------------------|--------------------------|--------------------------|--|--|
|                          |                          |                          | non-peer-reviewed manuscript(s) (reviews, book chapters) | Publishes peer-reviewed manuscript(s) containing scholarly work (clinical practice, quality improvement, patient safety, education, or research) |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>                                 | <input type="checkbox"/>   |
| Comments:                |                          |                          |  | Not Yet Achieved Level 1 <input type="checkbox"/>  |



Endocrinology, Diabetes, and Metabolism Milestones for Singapore

| Systems-Based Practice 1: Patient Safety and Quality Improvement              |   |  |   |   |
|---|---|--|---|---|
| Level 1   | Level 2   | Level 3  | Level 4   | Level 5   |
| Demonstrates knowledge of common patient safety events                        | Identifies system factors that lead to patient safety events  | Participates in analysis of patient safety events (simulated or actual)                            | Conducts analysis of patient safety events and offers error prevention strategies (simulated or actual)     | Actively engages teams and processes to modify systems to prevent patient safety events                   |
| Demonstrates knowledge of how to report patient safety events                 | Reports patient safety events through institutional reporting systems (actual or simulated)                           | Participates in disclosure of patient safety events to patients and families (simulated or actual) | Discloses patient safety events to patients and families (simulated or actual)                              | Role models or mentors others in the disclosure of patient safety events                                  |
| Demonstrates knowledge of basic quality improvement methodologies and metrics | Describes local quality improvement initiatives (e.g., community vaccination rate, infection rate, smoking cessation) | Participates in local quality improvement initiatives  | Demonstrates the skills required to identify, develop, implement, and analyze a quality improvement project | Creates, implements, and assesses quality improvement initiatives at the institutional or community level |
| <input type="checkbox"/>  | <input type="checkbox"/>  | <input type="checkbox"/>   | <input type="checkbox"/>  | <input type="checkbox"/>  |
| Comments:   |   |  |   | Not Yet Achieved Level 1 <input type="checkbox"/>   |

Endocrinology, Diabetes, and Metabolism Milestones for Singapore

| Systems-Based Practice 2: System Navigation for Patient-Centered Care            |  |  |  |   |
|--|--|--|--|---|
| Level 1  | Level 2  | Level 3  | Level 4  | Level 5   |
| Demonstrates knowledge of care coordination                                      | Coordinates care of patients in routine clinical situations effectively using the roles of the interprofessional teams | Coordinates care of patients in complex clinical situations effectively using the roles of their interprofessional teams | Role models effective coordination of patient-centered care among different disciplines and specialties  | Analyses the process of care coordination and leads in the design and implementation of improvements                |
| Identifies key elements for safe and effective transitions of care and hand-offs | Performs safe and effective transitions of care/hand-offs in routine clinical situations                               | Performs safe and effective transitions of care/hand-offs in complex clinical situations                                 | Role models and advocates for safe and effective transitions of care/hand-offs within and across health care delivery systems, including outpatient settings | Improves quality of transitions of care within and across health care delivery systems to optimize patient outcomes |
| Demonstrates knowledge of population and community health needs and disparities  | Identifies specific population and community health needs and inequities for their local population                    | Uses local resources effectively to meet the needs of a patient population and community                                 | Participates in changing and adapting practice to provide for the needs of specific populations  | Leads innovations and advocates for populations and communities with health care inequities                         |
| <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>  |
| Comments:  |  |  |  | Not Yet Achieved Level 1 <input type="checkbox"/>   |

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| Systems-Based Practice 3: Physician Role in Health Care Systems  |  |   |  |  |
|--|--|---|--|--|
| Level 1  | Level 2  | Level 3   | Level 4  | Level 5  |
| Identifies components of the complex health care system  | Describes the physician's role and how the interrelated components of complex health care system impact patient care | Analyzes how personal practice affects the system (e.g., length of stay, readmission rates, clinical efficiency)                                      | Manages the interrelated components of the complex health care systems for efficient and effective patient care                                    | Advocates for or leads change to enhance systems for high-value, efficient, and effective patient care     |
| Describes basic health payment systems, including government, private, public, and uninsured care, and different practice models | Delivers care informed by patient specific payment model   | Uses shared decision making in patient care, taking into consideration payment models   | Advocates for patient care understanding the limitations of each patient's payment model (e.g., community resources, patient assistance resources) | Participates in advocacy activities for health policy to better align payment systems with high-value care |
|  |  | Identifies resources and effectively plans for transition to practice (e.g., information technology, legal, billing and coding, financial, personnel) | Describes basic elements needed to transition to practice (e.g., contract negotiations, malpractice insurance, government regulation, compliance)  |  |
| <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>  | <input type="checkbox"/>   | <input type="checkbox"/>   |
| Comments:  |  |   |  | Not Yet Achieved Level 1 <input type="checkbox"/>  |

Endocrinology, Diabetes, and Metabolism Milestones for Singapore

| Practice-Based Learning and Improvement 1: Evidence-Based and Informed Practice   |  |  |  |   |
|---|--|--|--|---|
| Level 1   | Level 2  | Level 3  | Level 4  | Level 5   |
| Demonstrates how to access and use available evidence, and incorporate patient preferences and values to take care of a routine patient | Articulates clinical questions and elicits patient preferences and values to guide evidence-based care | Locates and applies the best available evidence, integrated with patient preference, to the care of complex patients | Critically appraises and applies evidence even in the face of uncertainty and conflicting evidence to guide care, tailored to the individual patient | Coaches others to critically appraise and apply evidence for complex patients; and/or participates in the development of guidelines |
| <input type="checkbox"/>  | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>  |
| Comments:   |  |  |  | Not Yet Achieved Level 1 <input type="checkbox"/>   |

Endocrinology, Diabetes, and Metabolism Milestones for Singapore

| Practice-Based Learning and Improvement 2: Reflective Practice and Commitment to Personal Growth |  |   |   |   |
|--|--|---|---|---|
| Level 1  | Level 2  | Level 3   | Level 4   | Level 5   |
| Accepts responsibility for personal and professional development by establishing goals           | Demonstrates openness to performance data (feedback and other input) to inform goals                       | Seeks performance data episodically, with adaptability and humility   | Intentionally seeks performance data consistently, with adaptability and humility                                     | Role models consistently seeking performance data, with adaptability and humility |
| Identifies the factors that contribute to gap(s) between expectations and actual performance     | Analyzes and reflects on the factors that contribute to gap(s) between expectations and actual performance | Analyzes, reflects on, and institutes behavioral change(s) to narrow the gap(s) between expectations and actual performance | Challenges assumptions and considers alternatives in narrowing the gap(s) between expectations and actual performance | Coaches others on reflective practice   |
| Actively seeks opportunities to improve  | Designs and implements a learning plan, with prompting   | Independently creates and implements a learning plan  | Uses performance data to measure the effectiveness of the learning plan and, when necessary, improves it              | Facilitates the design and implementation of learning plans for others            |
| <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>  | <input type="checkbox"/>  | <input type="checkbox"/>  |
| Comments:  |  |   |   | Not Yet Achieved Level 1 <input type="checkbox"/>                                 |

Endocrinology, Diabetes, and Metabolism Milestones for Singapore

| Professionalism 1: Professional Behavior and Ethical Principles  |   |   |   |  |
|--|---|---|---|--|
| Level 1  | Level 2   | Level 3   | Level 4   | Level 5  |
| Identifies and describes potential triggers for professionalism lapses   | Demonstrates insight into professional behavior in routine situations | Demonstrates professional behavior in complex or stressful situations             | Recognizes situations that may trigger professionalism lapses and intervenes to prevent lapses in self and others   | Coaches others when their behavior fails to meet professional expectations   |
| Describes when and how to appropriately report professionalism lapses, including strategies for addressing common barriers   | Takes responsibility for own professionalism lapses                   | Analyzes complex situations using ethical principles                              | Recognizes and utilizes appropriate resources for managing and resolving ethical dilemmas as needed (e.g., ethics consultations, literature review, risk management/legal consultation) | Identifies and seeks to address system-level factors that induce or exacerbate ethical problems or impede their resolution |
| Demonstrates knowledge of the ethical principles underlying informed consent, surrogate decision making, advance directives, confidentiality, error disclosure, stewardship of limited resources, and related topics | Analyzes straightforward situations using ethical principles          | Recognizes need to seek help in managing and resolving complex ethical situations |   |  |
| <input type="checkbox"/>   | <input type="checkbox"/>  | <input type="checkbox"/>  | <input type="checkbox"/>  | <input type="checkbox"/>   |
| Comments:  |   |   |   | Not Yet Achieved Level 1 <input type="checkbox"/>  |

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| Professionalism 2: Accountability/Conscientiousness  |   |   |  |   |
|--|---|---|--|---|
| Level 1  | Level 2   | Level 3   | Level 4  | Level 5   |
| <p>Takes responsibility for failure to complete tasks and responsibilities, identifies potential contributing factors, and describes strategies for ensuring timely task completion in the future</p> <p>Responds promptly to requests or reminders to complete tasks and responsibilities</p> | <p>Performs tasks and responsibilities in a timely manner with appropriate attention to detail in routine situations</p> <p>Recognizes situations that may impact own ability to complete tasks and responsibilities in a timely manner</p> | <p>Performs tasks and responsibilities in a timely manner with appropriate attention to detail in complex or stressful situations</p> <p>Proactively implements strategies to ensure that the needs of patients, teams, and systems are met</p> | <p>Recognizes situations that may impact others' ability to complete tasks and responsibilities in a timely manner</p> | <p>Takes ownership of system outcomes</p>         |
| <input type="checkbox"/>   | <input type="checkbox"/>  | <input type="checkbox"/>  | <input type="checkbox"/>   | <input type="checkbox"/>                          |
| Comments:  |   |   |  | Not Yet Achieved Level 1 <input type="checkbox"/> |

Endocrinology, Diabetes, and Metabolism Milestones for Singapore

| Professionalism 3: Self-Awareness and Help-Seeking                         |  |   |  |  |
|--|--|---|--|--|
| Level 1  | Level 2  | Level 3   | Level 4  | Level 5  |
| Recognizes status of personal and professional well-being, with assistance | Independently recognizes status of personal and professional well-being  | With assistance, proposes a plan to optimize personal and professional well-being                       | Independently develops a plan to optimize personal and professional well-being                       | Coaches others when emotional responses or limitations in knowledge/skills do not meet professional expectations |
| Recognizes limits in the knowledge/skills of self or team, with assistance | Independently recognizes limits in the knowledge/skills of self or team<br><br>Demonstrates appropriate help-seeking behaviors | With assistance, proposes a plan to remediate or improve limits in the knowledge/skills of self or team | Independently develops a plan to remediate or improve limits in the knowledge/skills of self or team |  |
| <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>  | <input type="checkbox"/>   | <input type="checkbox"/>   |
| Comments:  |  |   |  | Not Yet Achieved Level 1 <input type="checkbox"/>  |



Endocrinology, Diabetes, and Metabolism Milestones for Singapore

| Interpersonal and Communication Skills 1: Patient- and Family-Centered Communication  |   |   |  |  |
|---|---|---|--|--|
| Level 1   | Level 2   | Level 3   | Level 4  | Level 5  |
| <p>Uses language and non-verbal behavior to demonstrate respect and establish rapport</p> <p>Identifies common barriers to effective communication (e.g., language, disability) while accurately communicating own role within the health care system</p> <p>Identifies the need to adjust communication strategies based on assessment of patient/family expectations and understanding of their health status and treatment options</p> | <p>Establishes a therapeutic relationship in straightforward encounters using active listening and clear language</p> <p>Identifies complex barriers to effective communication (e.g., health literacy, cultural)</p> <p>Organizes and initiates communication with patient/family by introducing stakeholders, setting the agenda, clarifying expectations, and verifying an understanding of the clinical situation</p> | <p>Establishes a therapeutic relationship in challenging patient encounters</p> <p>When prompted, reflects on personal biases while attempting to minimize communication barriers</p> <p>With guidance, sensitively and compassionately delivers medical information; elicits patient/family values, goals and preferences; and acknowledges uncertainty and conflict</p> | <p>Easily establishes therapeutic relationships, with attention to patient/family concerns and context, regardless of complexity</p> <p>Independently recognizes personal biases while attempting to proactively minimize communication barriers</p> <p>Independently uses shared decision making to align patient/family values, goals, and preferences with treatment options to make a personalized care plan</p> | <p>Mentors others in situational awareness and critical self-reflection to consistently develop positive therapeutic relationships</p> <p>Role models self-awareness practice while identifying teaching a contextual approach to minimize communication barriers</p> <p>Role models shared decision making in patient/family communication in situations with a high degree of uncertainty/conflict</p> |
| <input type="checkbox"/>  | <input type="checkbox"/>  | <input type="checkbox"/>  | <input type="checkbox"/>   | <input type="checkbox"/>   |
| Comments:   |   |   |  | Not Yet Achieved Level 1 <input type="checkbox"/>  |

Endocrinology, Diabetes, and Metabolism Milestones for Singapore

| Interpersonal and Communication Skills 2: Interprofessional and Team Communication |  |   |   |  |
|--|--|---|---|--|
| Level 1  | Level 2  | Level 3   | Level 4   | Level 5  |
| Respectfully requests a consultation   | Clearly and concisely requests a consultation  | Checks own understanding of consultant recommendations  | Coordinates recommendations from different members of the health care team to optimize patient care | Role models flexible communication strategies that value input from all health care team members, resolving conflict when needed |
| Respectfully receives a consultation request                                       | Clearly and concisely responds to a consultation request   | Checks understanding of recommendations when providing consultation   | Communicates feedback and constructive criticism to superiors                                       | Facilitates regular health care team-based feedback in complex situations  |
| Uses language that values all members of the health care team                      | Communicates information effectively with all health care team members<br><br>Solicits feedback on performance as a member of the health care team | Uses active listening to adapt communication style to fit team needs<br><br>Communicates concerns and provides feedback to peers and learners |   |  |
| <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>  | <input type="checkbox"/>  | <input type="checkbox"/>   |
| Comments:  |  |   |   | Not Yet Achieved Level 1 <input type="checkbox"/>  |

Endocrinology, Diabetes, and Metabolism Milestones for Singapore

| Interpersonal and Communication Skills 3: Communication within Health Care Systems   |   |  |  |  |
|--|---|--|--|--|
| Level 1  | Level 2   | Level 3  | Level 4  | Level 5  |
| Accurately records information in the patient record   | Demonstrates organized diagnostic and therapeutic reasoning through notes in the patient record                                 | Concisely reports diagnostic and therapeutic reasoning in the patient record   | Communicates clearly, concisely, in a timely manner, and in an organized written form, including anticipatory guidance | Models feedback to improve others' written communication   |
| Safeguards patient personal health information   | Demonstrates accurate, timely, and appropriate use of documentation shortcuts   | Appropriately selects direct (e.g., telephone, in-person) and indirect (e.g., progress notes, text messages) forms of communication based on context | Produces written or verbal communication (e.g., patient notes, email) that serves as an example for others to follow   | Guides departmental or institutional communication around policies and procedures  |
| Communicates through appropriate channels as required by institutional policy (e.g., patient safety reports, cell phone/pager usage) | Documents required data in formats specified by institutional policy<br><br>Respectfully communicates concerns about the system | Uses appropriate channels to offer clear and constructive suggestions to improve the system  | Initiates difficult conversations with appropriate stakeholders to improve the system                                  | Facilitates dialogue regarding systems issues among larger community stakeholders (e.g., institution, health care system, field) |
| <input type="checkbox"/>   | <input type="checkbox"/>  | <input type="checkbox"/>   | <input type="checkbox"/>   | <input type="checkbox"/>   |
| Comments:  |   |  |  | Not Yet Achieved Level 1 <input type="checkbox"/>  |